

State of Oregon

Department of Environmental Quality

Memorandum

**Date:** May 4, 2012

**To:** Christy Brown, EPA Region 10 [AWT-121]

**From:** Fredrick Moore, Permit Writer

**Subject:** Response to Information Request Dated May 2, 2012  
Lockheed Martin The Dalles Facility • ORD 052 221 025

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Sent Via Email

Christy, from your May 2 email I have listed out below the items you requested.

<u>Item No.</u>	<u>Item Description</u>
1	Waste Characterization of the RCRA Landfill
2	Engineering Design of the Original Designed Waste Pile
3	Engineering Design of the Subsequent Landfill
4	Information on the Run-On/Run-Off Management at the RCRA Landfill
5	Gas Information at the RCRA Landfill Vents
6	Characterization of the RCRA Leachate
7	Documents Regarding Proposals or Analysis of the CO <sub>2</sub> Treatment and Subsequent Vacuum System

Attached to this memo is Item No. 1 which is a waste characterization from the Lockheed 1998 Part B application. I shall be sending the other item nos. as I can find and retrieve them.

Attachment



**RCRA  
Part B Permit Application  
1998**

RCRA Landfill  
The Dalles, Oregon

P R E P A R E D     F O R

Lockheed Martin Corporation

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## **CHAPTER C**

### **WASTE CHARACTERISTICS**

#### **C-1 Chemical and Physical Analyses [270.14(b)(2), 264.13(a)]**

Only one type of hazardous waste is stored at the RLF. The waste consists of spent potliners from primary aluminum production. This waste is listed in 40 CFR 261.32 as EPA hazardous waste number K088 and is hazardous based on its toxicity. The waste is to be managed by permanent storage within the RLF.

The physical and chemical makeup of the cathode waste is provided in Tables C-1 and C-2. To obtain the chemical makeup information, one entire cathode, weighing 65 tons, was crushed to minus 1/4 inch, then rotary mixed for several hours in a concrete truck. A large quantity was riffled down into five 55-gallon drums; two samples were collected from each drum for analysis. The laboratory data sheets are provided in Appendix A.

##### **C-1a Containerized Waste [270.15(b)(1)]**

Not applicable; facility to be permitted is a landfill.

##### **C-1b Waste in Tanks [264.191]**

Not applicable; facility to be permitted is a landfill.

##### **C-1c Waste in Piles [264.250(c)(1) and (4)]**

Not applicable; facility to be permitted is a landfill.

Table C-1. Physical Make-Up of a Cathode  
RCRA Part B Permit Application

<u>Material</u>	<u>Weight (Tons)</u>
Insulating Brick	5.0
Fire Brick	11.5
C-1 Brick	3.9
Mortar	0.8
Castable	1.3
Permalite	<0.1
Alumina	0.1
Grog (crushed brick)	1.0
Bottom Carbon Blocks	9.4
Collector Bars (steel)	8.2
Blowing Wool	<0.1
Kao Wool	<0.1
Cerfel Seals	<0.1
Paper Seals	<0.1
Collector Bar Tabs (steel)	0.1
Slot Paste	2.5
Side Ram	7.0
Nuts and Bolts	0.1
Side Carbon Blocks	2.2
Cast Iron	1.4
Plaster	0.1
Shell Wt. (steel)	12.6
Welding Rods and Bar	0.2
Total Cathode Weight =	~67.4 Tons
Minus salvagable metal =	~46.4 Tons

Table C-2. Chemical Make-Up of a Typical Waste Cathode  
RCRA Part B Permit Application

<u>Component</u>	<u>% Weight</u>
Carbon (as C)	28.0
Fluoride (as F)	14.7
Aluminum (as Al)	23.1
Sodium (as Na)	21.4
Silica (as SiO <sub>2</sub> )	2.7
Calcium (as Ca)	1.4
Sulfur (as S)	0.1
Total Water Soluble Cyanide	1,700 mg/kg
Free Water Soluble Cyanide	620 mg/kg
pH 1:1 Slurry	12.6 std. pH units

**C-1d Landfilled Wastes [264.314(c)]**

The RLF was constructed in accordance with the Closure and Post-Closure Plans (Geraghty & Miller 1989b) approved by the Oregon Department of Environmental Quality, which did not include analysis of the waste for free liquids.

**C-1e Wastes Incinerated and Wastes Used in Performance Test [270.62(b)(2)(i)]**

Not applicable; facility to be permitted is a landfill.

**C-1f Wastes to be Land Treated [270.20(b)(4), 264.271(a)(1) and (2), 264.276, Appendix VIII]**

Not applicable; facility to be permitted is a landfill.

**C-2 Waste Analysis Plan [270.14(b)(3), 264.13(b) and (c)]**

No Waste Analysis Plan is available. The RLF was closed in accordance with the approved Closure and Post-Closure Plan dated December 1989.

**C-2a Parameters and Rationale [264.13(b)(1)]**

Not applicable; refer to Section C-2.



**C-2b Test Methods [264.13(b)(2)]**

Not applicable; refer to Section C-2.

**C-2c Sampling Methods [264.13(b)(3), Part 261, Appendix I]**

Not applicable; refer to Section C-2.

**C-2d Frequency of Analyses [264.13(b)(4)]**

Not applicable; refer to Section C-2.

**C-2e Additional Requirements for Wastes Generated Off-Site [264.13(c)]**

Not applicable; no off-site wastes are stored at the RLF.

**C-2f Additional Requirements for Ignitable, Reactive or Incompatible Wastes  
[264.13(b)(6), 264.17]**

Not applicable; no ignitable, reactive, or incompatible wastes are stored at the RLF.

**C-3 Waste Analysis Requirements Pertaining to Land Disposal Requirements [268.7]**

Spent potliner from primary aluminum production, listed in 40 CFR 261.32 as EPA hazardous waste number K088, was not listed in 40 CFR 268.33, .34, or .35, at the time of construction and was therefore not subject to land disposal restrictions.